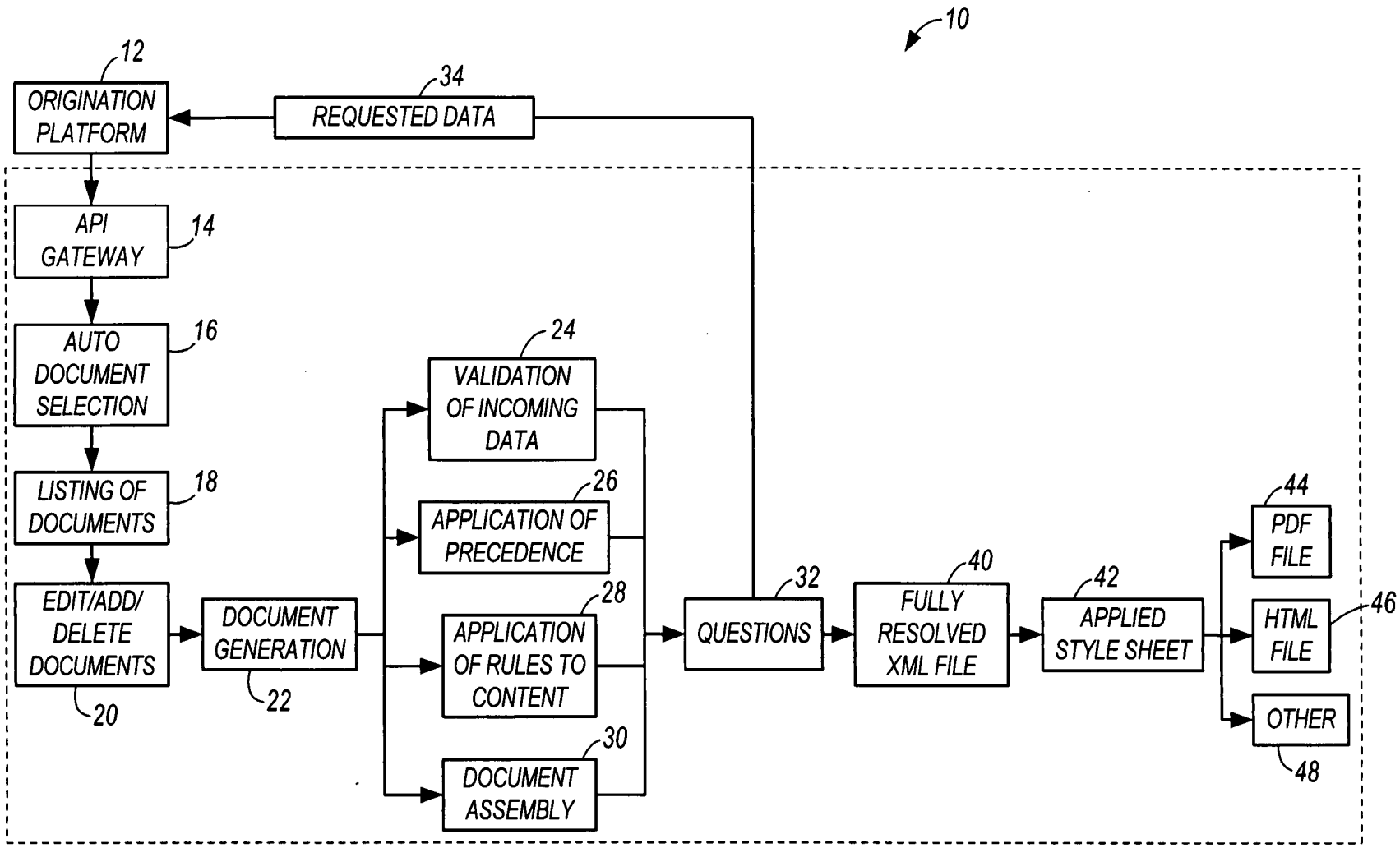

10
12
ORIGINATION PLATFORM
34
REQUESTED DATA
API GATEWAY
14
AUTO DOCUMENT SELECTION
16
LISTING OF DOCUMENTS
18
EDIT/ADD/ DELETE DOCUMENTS
20
DOCUMENT GENERATION
22
24
VALIDATION OF INCOMING DATA
26
APPLICATION OF PRECEDENCE
28
APPLICATION OF RULES TO CONTENT
30
DOCUMENT ASSEMBLY
32
QUESTIONS
40
FULLY RESOLVED XML FILE
42
APPLIED STYLE SHEET
44
PDF FILE
HTML FILE
46
OTHER
48

FIG. 1

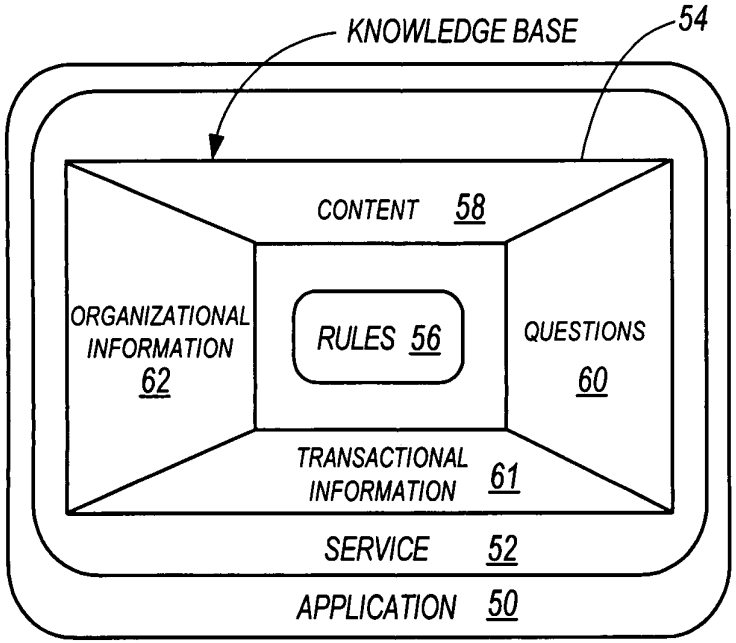

KNOWLEDGE BASE
54
CONTENT 58
ORGANIZATIONAL INFORMATION 62
RULES 56
QUESTIONS 60
TRANSACTIONAL INFORMATION 61
SERVICE 52
APPLICATION 50

FIG. 2

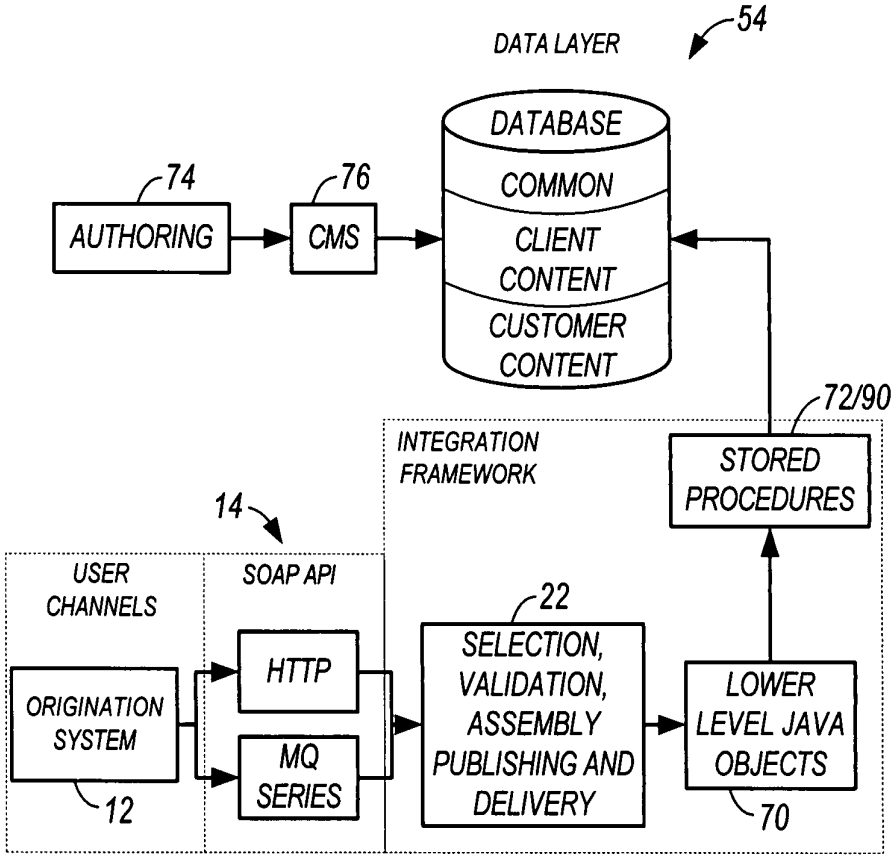

DATA LAYER
54
DATABASE
COMMON
CLIENT CONTENT
CUSTOMER CONTENT
74
AUTHORING
76
CMS
72/90
STORED PROCEDURES
INTEGRATION FRAMEWORK
14
USER CHANNELS
SOAP API
ORIGINATION SYSTEM
12
HTTP
MQ SERIES
22
SELECTION, VALIDATION, ASSEMBLY PUBLISHING AND DELIVERY
LOWER LEVEL JAVA OBJECTS
70

FIG. 3

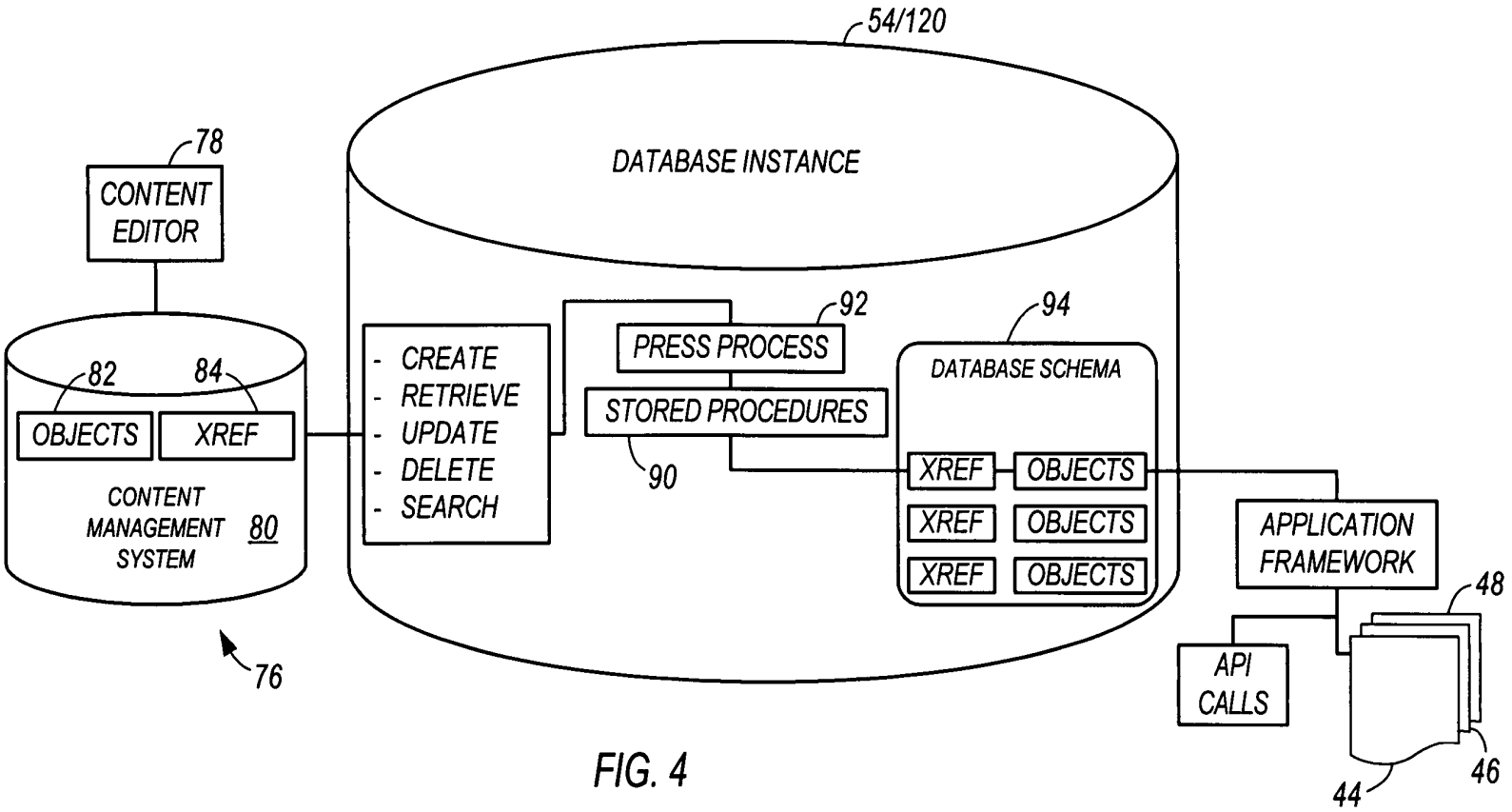

54/120
DATABASE INSTANCE
78
CONTENT EDITOR
82
84
OBJECTS
XREF
CONTENT MANAGEMENT SYSTEM 80
76
- CREATE
- RETRIEVE
- UPDATE
- DELETE
- SEARCH
92
PRESS PROCESS
STORED PROCEDURES
90
94
DATABASE SCHEMA
XREF
OBJECTS
XREF
OBJECTS
XREF
OBJECTS
APPLICATION FRAMEWORK
48
API CALLS
44
46

FIG. 4

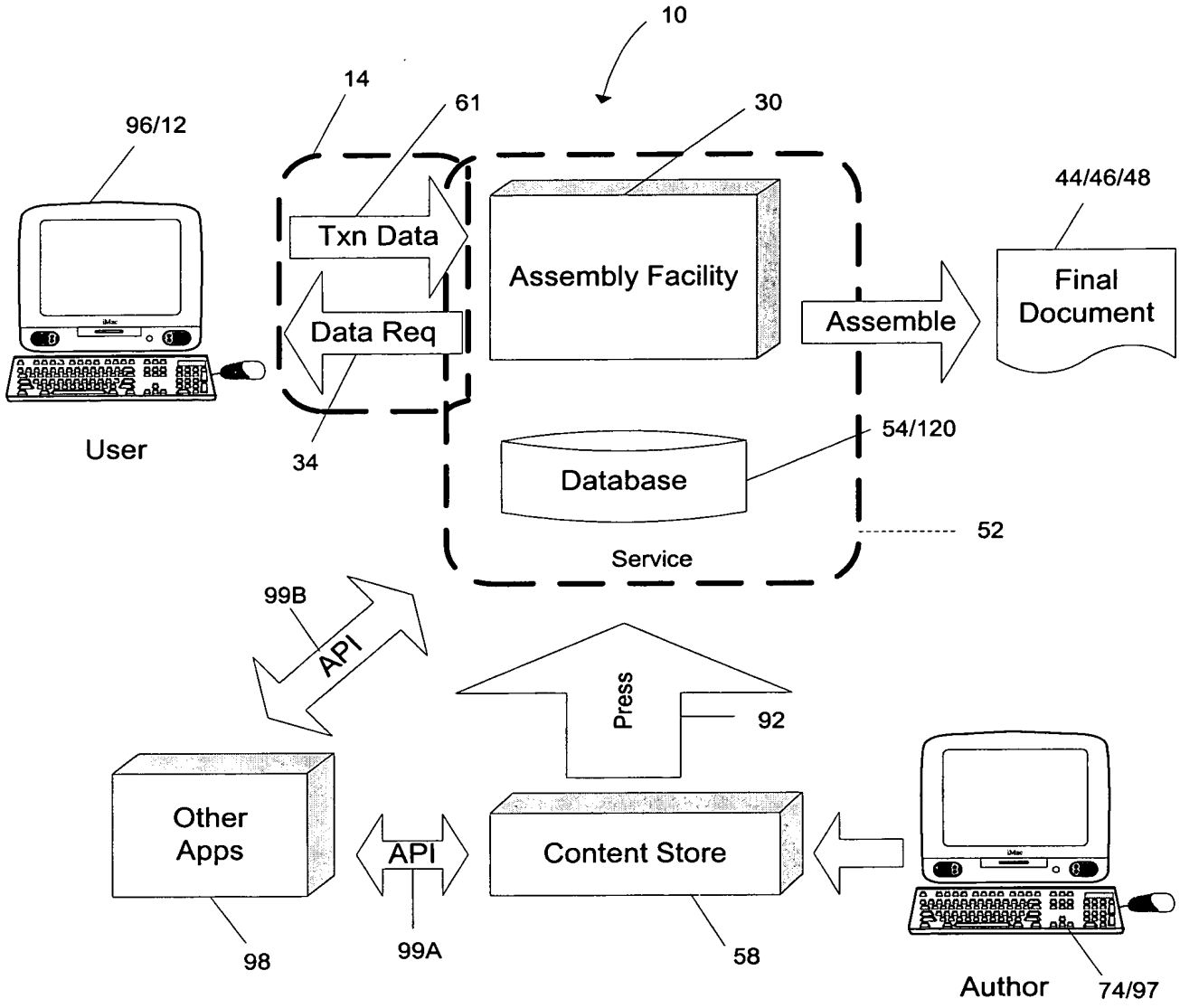

10
14
61
30
96/12
44/46/48
Txn Data
Assembly Facility
Assemble
Final Document
Data Req
User
34
54/120
Database
52
Service
99B
API
Press
92
Other Apps
API
Content Store
98
99A
58
Author
74/97

Fig. 4A

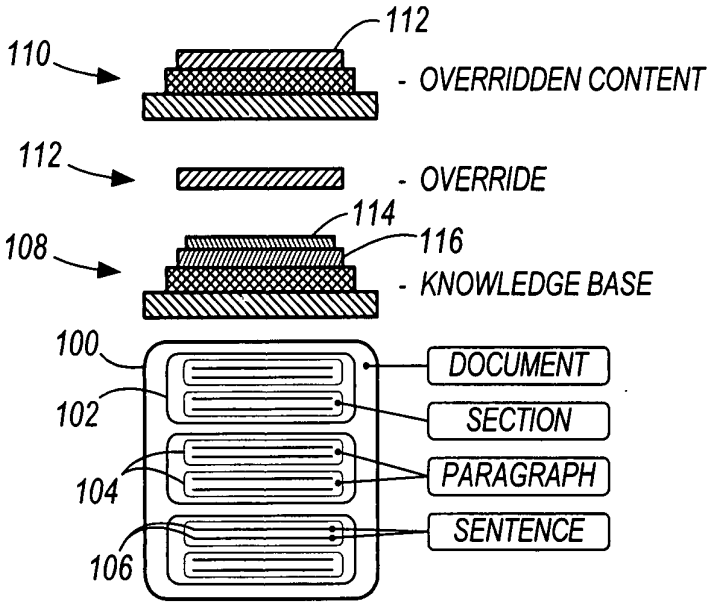

110
112
- OVERRIDDEN CONTENT
112
- OVERRIDE
108
114
116
- KNOWLEDGE BASE
100
102
104
106
DOCUMENT
SECTION
PARAGRAPH
SENTENCE

FIG. 6

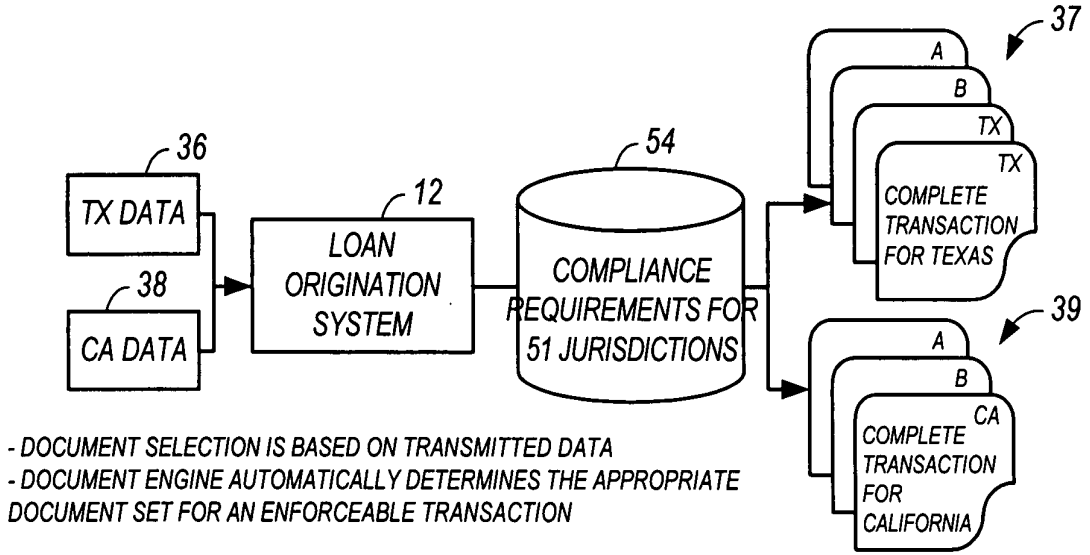

36
TX DATA
38
CA DATA
12
LOAN ORIGINATION SYSTEM
54
COMPLIANCE REQUIREMENTS FOR 51 JURISDICTIONS
37
A
B
TX
TX
COMPLETE TRANSACTION FOR TEXAS
39
A
B
CA
COMPLETE TRANSACTION FOR CALIFORNIA
- DOCUMENT SELECTION IS BASED ON TRANSMITTED DATA
- DOCUMENT ENGINE AUTOMATICALLY DETERMINES THE APPROPRIATE DOCUMENT SET FOR AN ENFORCEABLE TRANSACTION

FIG. 5

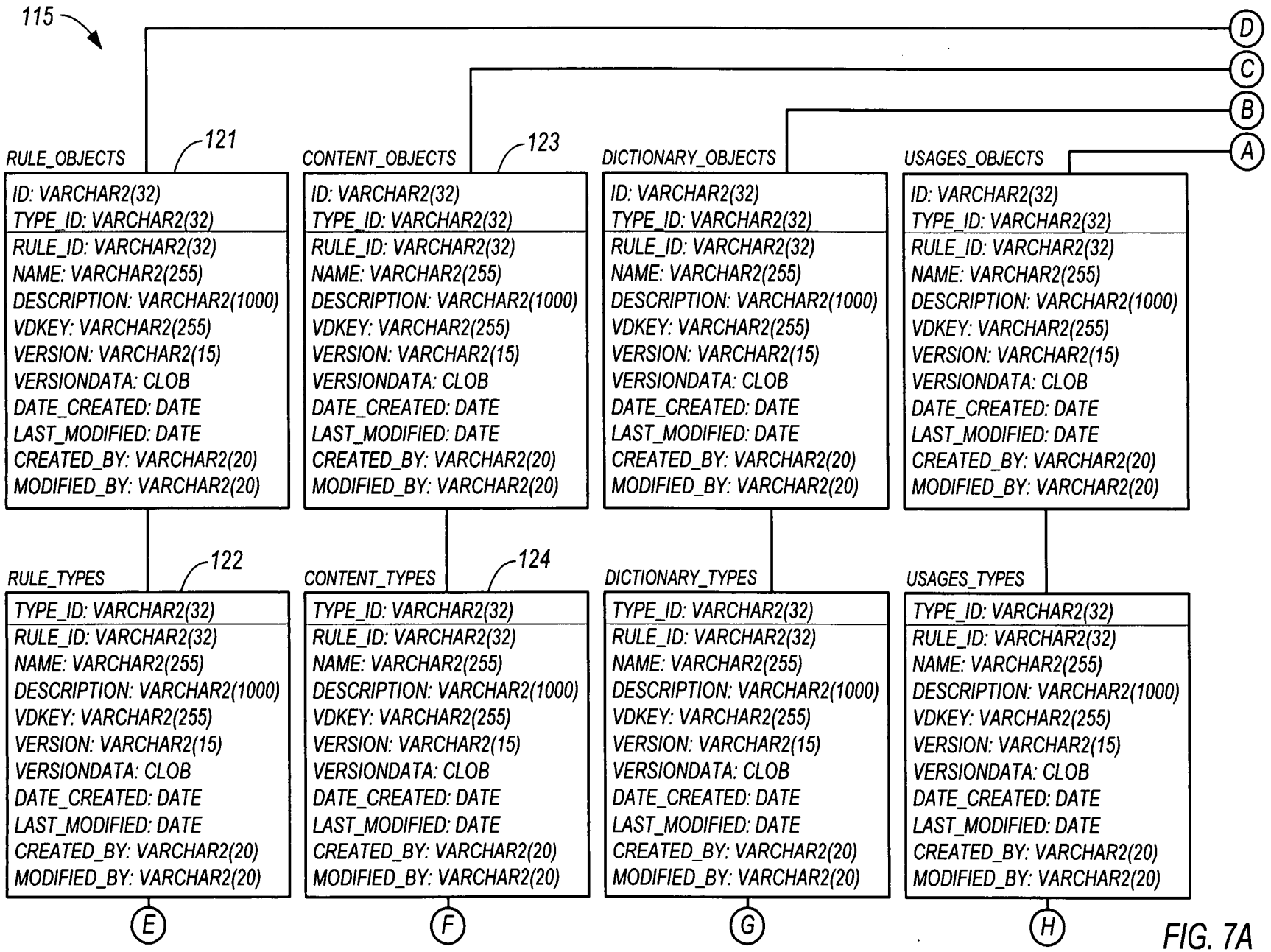

115
D
C
B
A
RULE_OBJECTS
121
ID: VARCHAR2(32)
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
CONTENT_OBJECTS
123
ID: VARCHAR2(32)
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
DICTIONARY_OBJECTS
ID: VARCHAR2(32)
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
USAGES_OBJECTS
ID: VARCHAR2(32)
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
RULE_TYPES
122
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
CONTENT_TYPES
124
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
DICTIONARY_TYPES
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
USAGES_TYPES
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
E
F
G
H

FIG. 7A

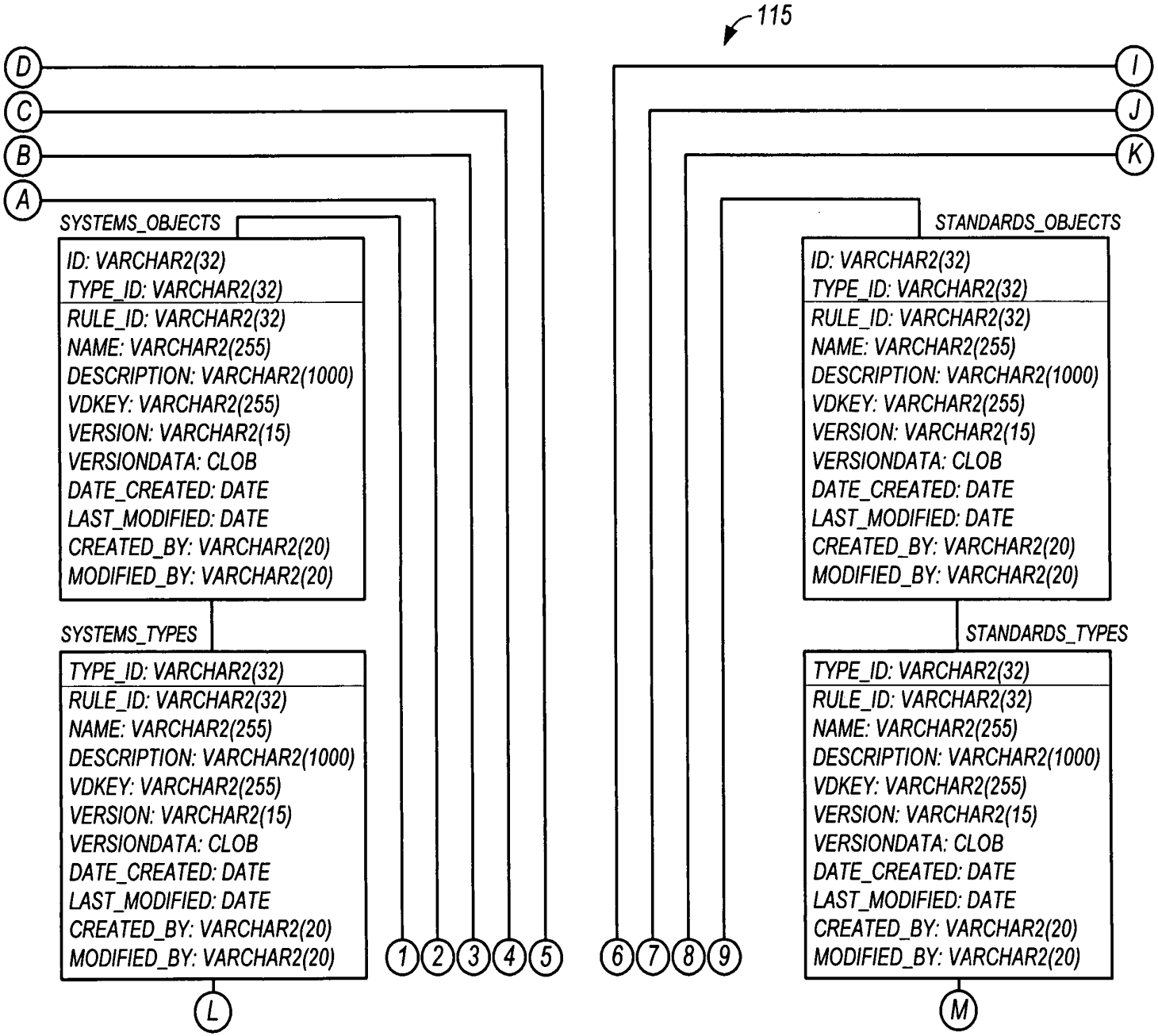

115
D
C
B
A
I
J
K
SYSTEMS_OBJECTS
ID: VARCHAR2(32)
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
STANDARDS_OBJECTS
ID: VARCHAR2(32)
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
SYSTEMS_TYPES
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
STANDARDS_TYPES
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
1
2
3
4
5
6
7
8
9
L
M

FIG. 7B

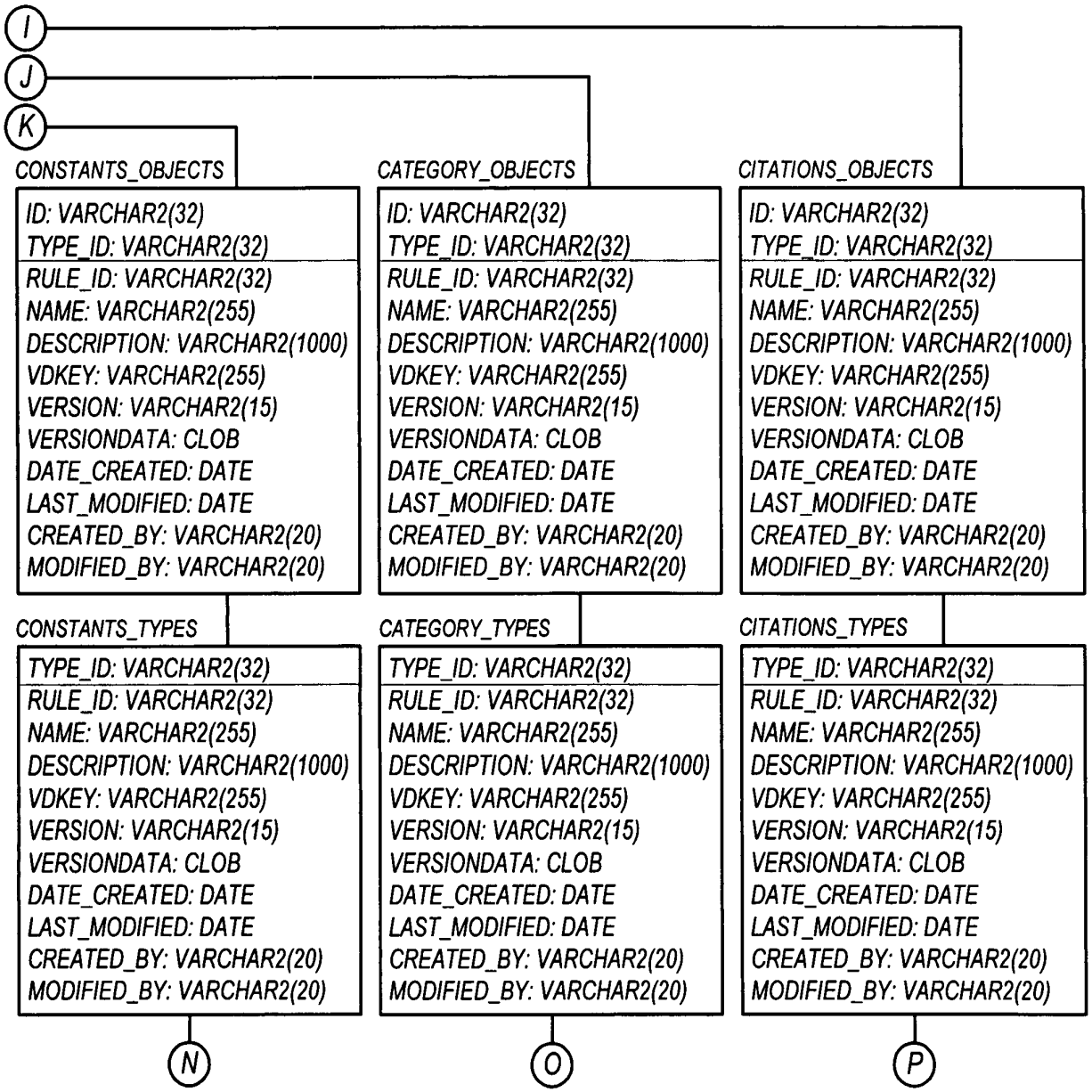

I
J
K
115
CONSTANTS_OBJECTS
ID: VARCHAR2(32)
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
CATEGORY_OBJECTS
ID: VARCHAR2(32)
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
CITATIONS_OBJECTS
ID: VARCHAR2(32)
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
CONSTANTS_TYPES
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
CATEGORY_TYPES
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
CITATIONS_TYPES
TYPE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
VDKEY: VARCHAR2(255)
VERSION: VARCHAR2(15)
VERSIONDATA: CLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
N
O
P

FIG. 7C

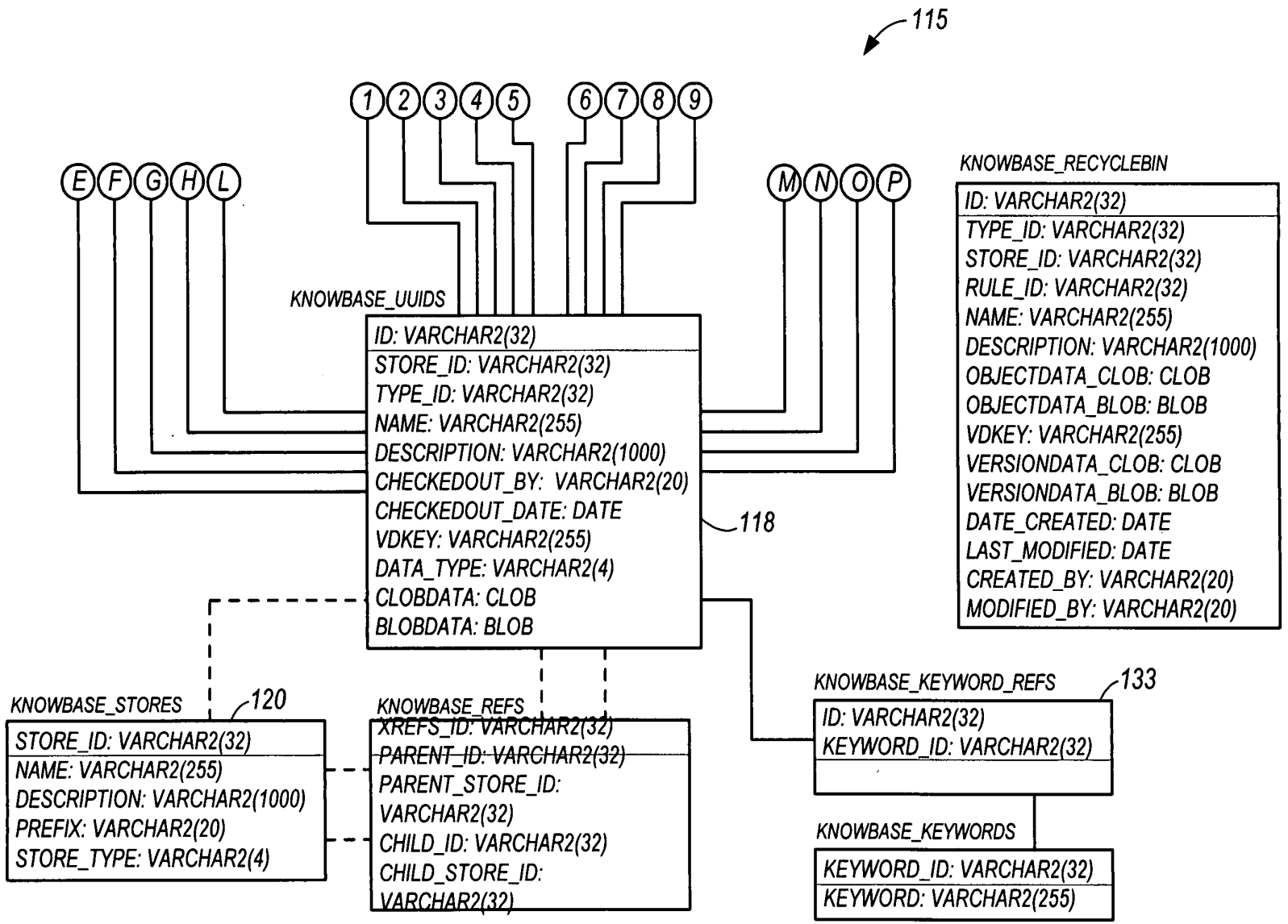

115
1
2
3
4
5
6
7
8
9
E
F
G
H
L
M
N
O
P
KNOWBASE_UUIDS
ID: VARCHAR2(32)
STORE_ID: VARCHAR2(32)
TYPE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
CHECKEDOUT_BY: VARCHAR2(20)
CHECKEDOUT_DATE: DATE
VDKEY: VARCHAR2(255)
DATA_TYPE: VARCHAR2(4)
CLOBDATA: CLOB
BLOBDATA: BLOB
118
KNOWBASE_RECYCLEBIN
ID: VARCHAR2(32)
TYPE_ID: VARCHAR2(32)
STORE_ID: VARCHAR2(32)
RULE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
OBJECTDATA_CLOB: CLOB
OBJECTDATA_BLOB: BLOB
VDKEY: VARCHAR2(255)
VERSIONDATA_CLOB: CLOB
VERSIONDATA_BLOB: BLOB
DATE_CREATED: DATE
LAST_MODIFIED: DATE
CREATED_BY: VARCHAR2(20)
MODIFIED_BY: VARCHAR2(20)
KNOWBASE_STORES
120
STORE_ID: VARCHAR2(32)
NAME: VARCHAR2(255)
DESCRIPTION: VARCHAR2(1000)
PREFIX: VARCHAR2(20)
STORE_TYPE: VARCHAR2(4)
KNOWBASE_REFS
XREFS_ID: VARCHAR2(32)
PARENT_ID: VARCHAR2(32)
PARENT_STORE_ID: VARCHAR2(32)
CHILD_ID: VARCHAR2(32)
CHILD_STORE_ID: VARCHAR2(32)
KNOWBASE_KEYWORD_REFS
133
ID: VARCHAR2(32)
KEYWORD_ID: VARCHAR2(32)
KNOWBASE_KEYWORDS
KEYWORD_ID: VARCHAR2(32)
KEYWORD: VARCHAR2(255)

FIG. 7D

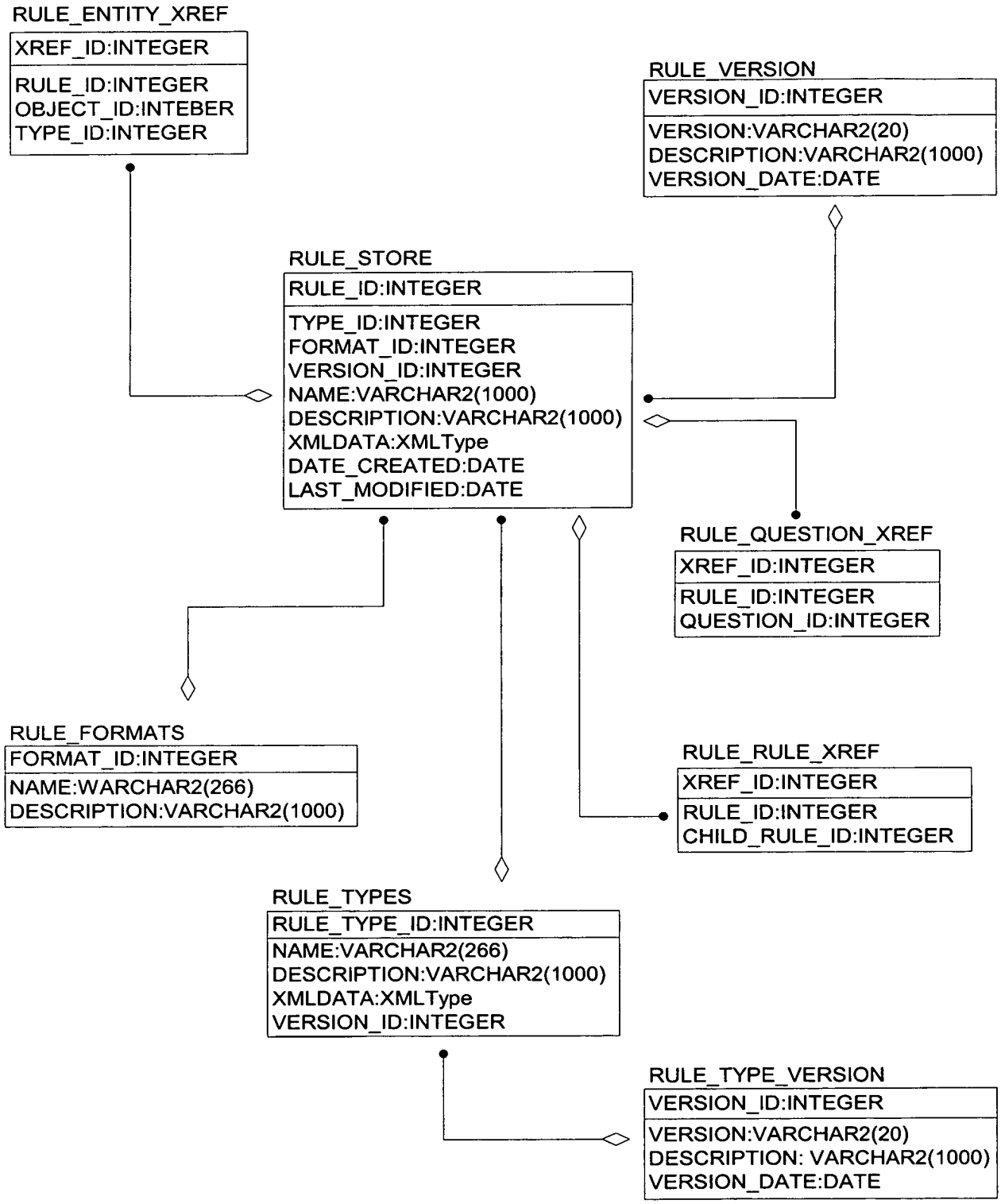

RULE_ENTITY_XREF
XREF_ID:INTEGER
RULE_ID:INTEGER
OBJECT_ID:INTEBER
TYPE_ID:INTEGER
RULE_VERSION
VERSION_ID:INTEGER
VERSION:VARCHAR2(20)
DESCRIPTION:VARCHAR2(1000)
VERSION_DATE:DATE
RULE_STORE
RULE_ID:INTEGER
TYPE_ID:INTEGER
FORMAT_ID:INTEGER
VERSION_ID:INTEGER
NAME:VARCHAR2(1000)
DESCRIPTION:VARCHAR2(1000)
XMLDATA:XMLType
DATE_CREATED:DATE
LAST_MODIFIED:DATE
RULE_QUESTION_XREF
XREF_ID:INTEGER
RULE_ID:INTEGER
QUESTION_ID:INTEGER
RULE_FORMATS
FORMAT_ID:INTEGER
NAME:WARCHAR2(266)
DESCRIPTION:VARCHAR2(1000)
RULE_RULE_XREF
XREF_ID:INTEGER
RULE_ID:INTEGER
CHILD_RULE_ID:INTEGER
RULE_TYPES
RULE_TYPE_ID:INTEGER
NAME:VARCHAR2(266)
DESCRIPTION:VARCHAR2(1000)
XMLDATA:XMLType
VERSION_ID:INTEGER
RULE_TYPE_VERSION
VERSION_ID:INTEGER
VERSION:VARCHAR2(20)
DESCRIPTION: VARCHAR2(1000)
VERSION_DATE:DATE

Fig. 8

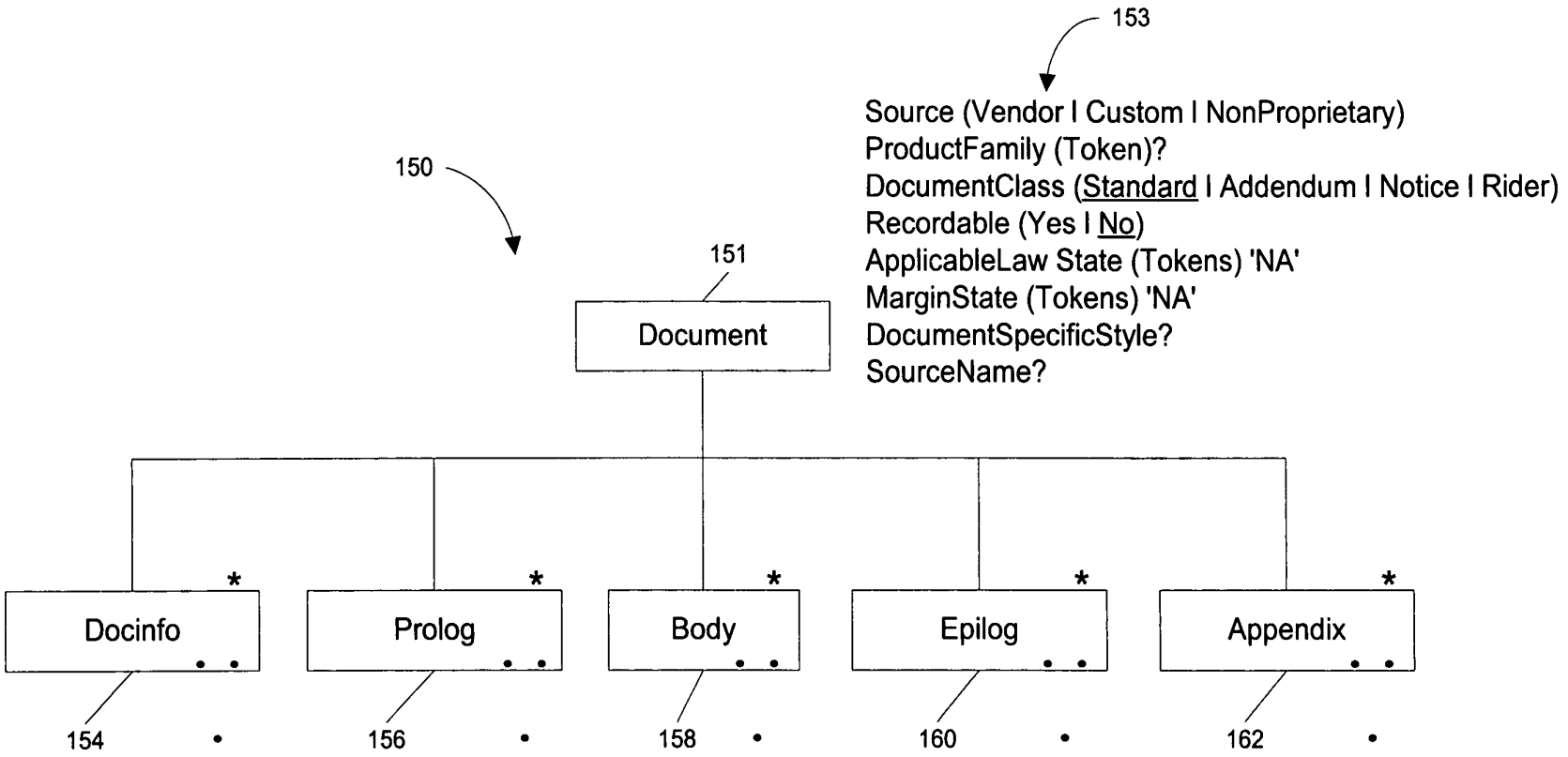
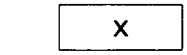
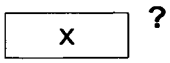

153
Source (Vendor I Custom I NonProprietary)
ProductFamily (Token)?
DocumentClass (Standard I Addendum I Notice I Rider)
Recordable (Yes I No)
ApplicableLaw State (Tokens) 'NA'
MarginState (Tokens) 'NA'
DocumentSpecificStyle?
SourceName?
150
151
Document
Docinfo
Prolog
Body
Epilog
Appendix
*
154
156
158
160
162

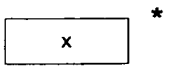
Fig. 9



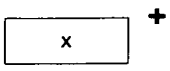
Element x is required



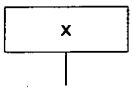
Element x is optional



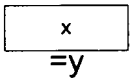
Element x is optional and repeatable



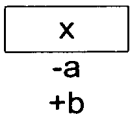
Element x is required and repeatable



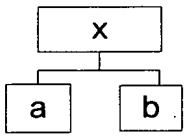
Element x has the following content model



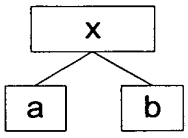
Element x has the same content model as element y or has content as described



Element x's content should not include element a and should freely include element b

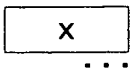


Element x contents element a followed by element b

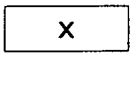


Element x contents either element a or element b

Common content model fragment reused in multiple contexts.

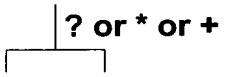


Element x's content is described elsewhere

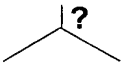


optional-attrib?
required-attrib.
attrib (**default** | other)
attrib (**"default"**)

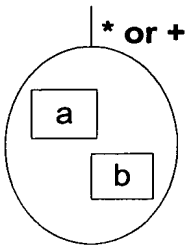
Some attribute specifications



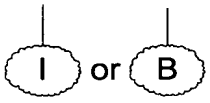
Sequential group is optional, optional-repeatable, or required-repeatable



Either-or group is optional



Elements a and b can appear repeatedly or not at all, in any order (+ means at least one element is required)



Mixture of elements and/or characters; exact contents are detailed on block or inline matrix

#PCDATA	**Characters plus entities and possibly elements**
RCDATA	**Characters plus entities**
CDATA	**Characters only, or string for attribute value**
ENTITY	**Entity reference for attribute value**
ID	**Unique identifier within document**
IDREF	**Reference to identifier declared within document**
EMPTY	**Element cannot have any content**

Fig. 10

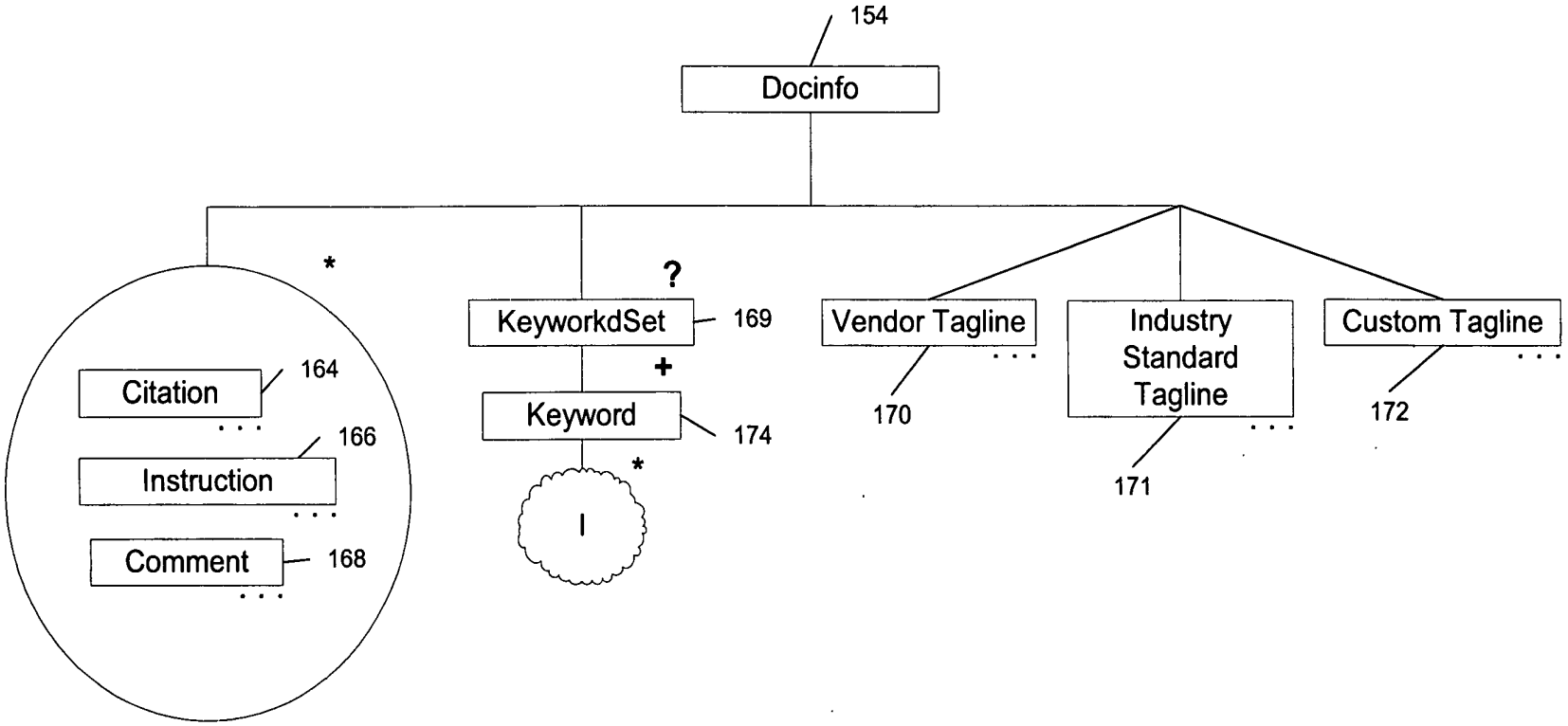

154
Docinfo
*
Citation
164
Instruction
166
Comment
168
?
KeyworkdSet
169
+
Keyword
174
*
I
Vendor Tagline
170
Industry Standard Tagline
171
Custom Tagline
172

Fig. 11

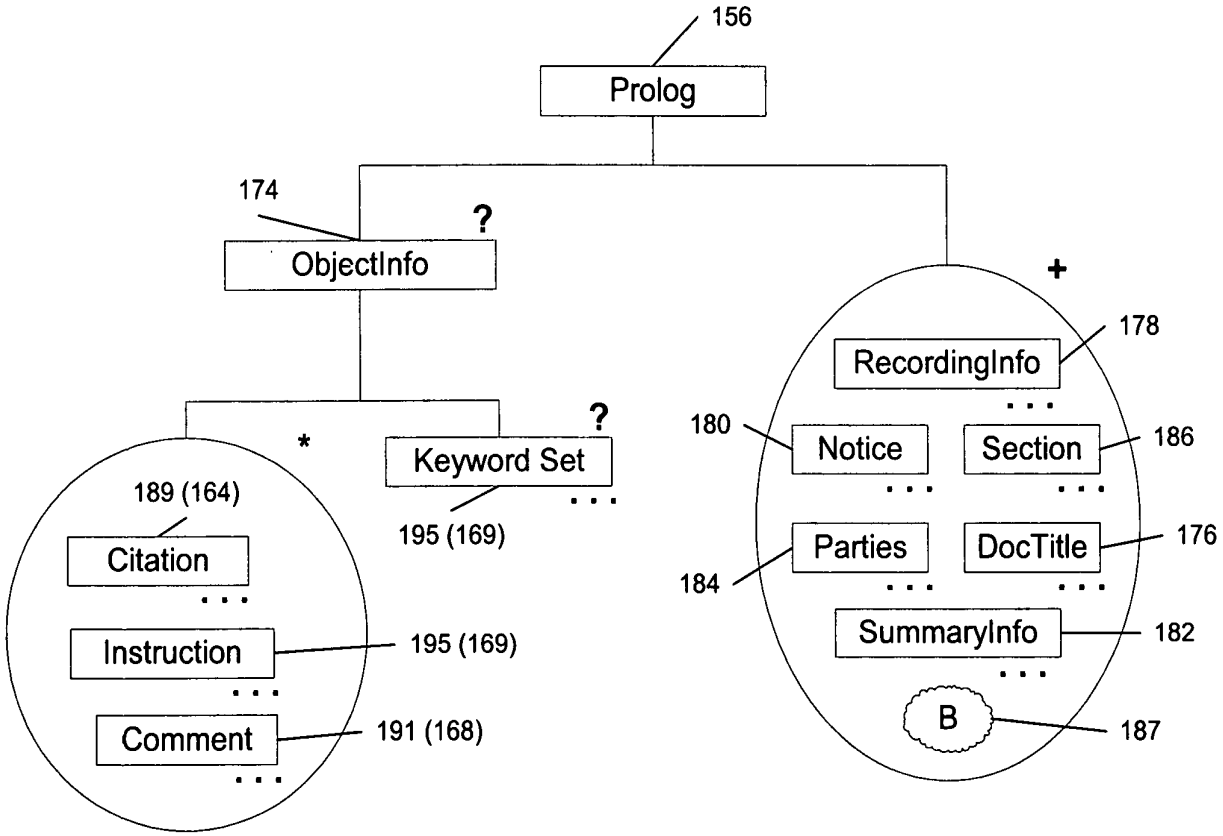

156
Prolog
174
?
ObjectInfo
+
178
RecordingInfo
180
Notice
Section
186
?
*
Keyword Set
189 (164)
195 (169)
Citation
Parties
DocTitle
176
184
Instruction
195 (169)
SummaryInfo
182
Comment
191 (168)
B
187

Fig. 12

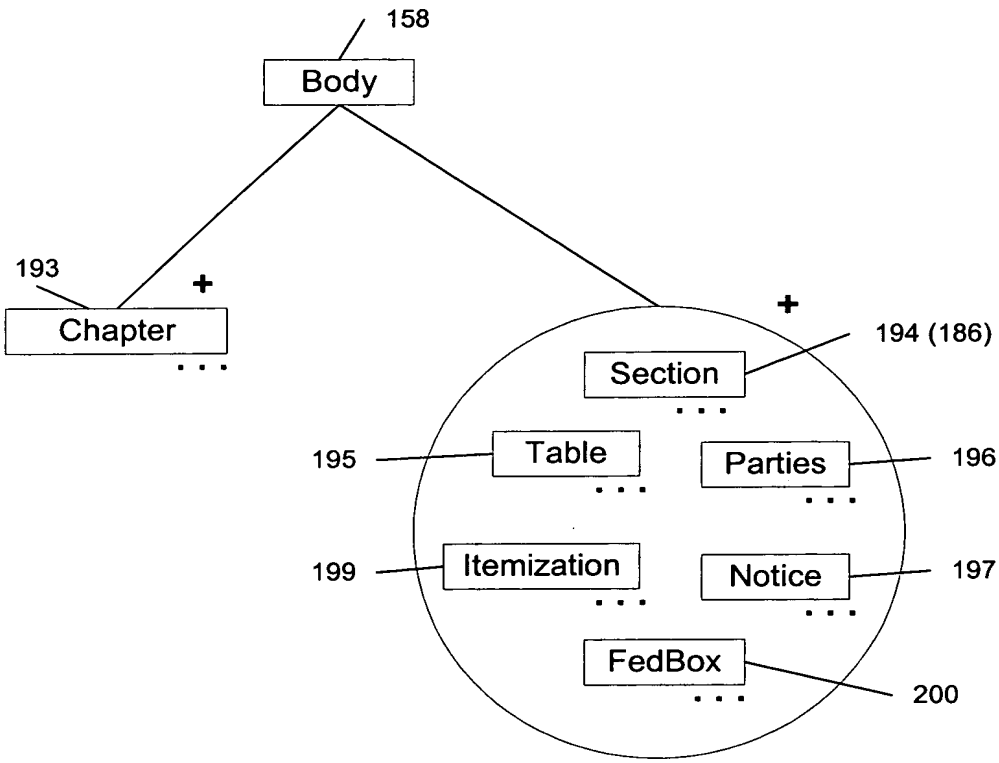

158
Body
193
Chapter
194 (186)
Section
195
Table
Parties
196
199
Itemization
Notice
197
FedBox
200

Fig. 13

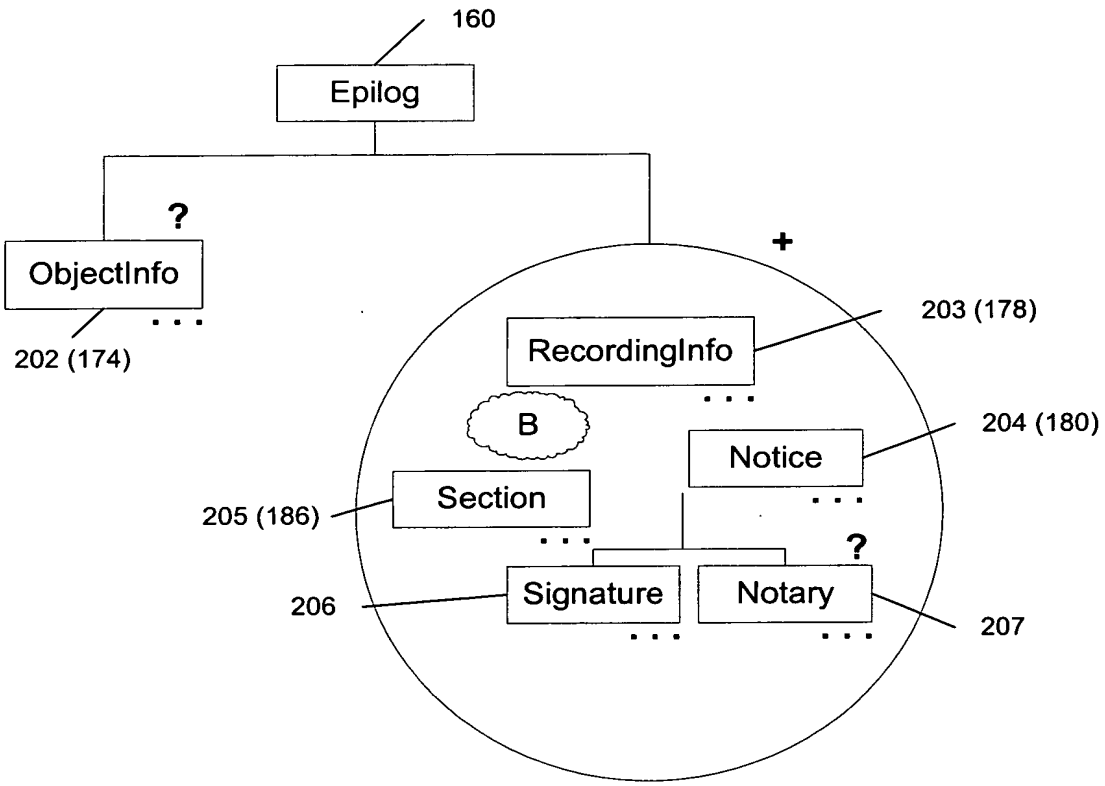

160
Epilog
?
ObjectInfo
202 (174)
+
203 (178)
RecordingInfo
B
204 (180)
Notice
205 (186)
Section
?
206
Signature
Notary
207

Fig. 14

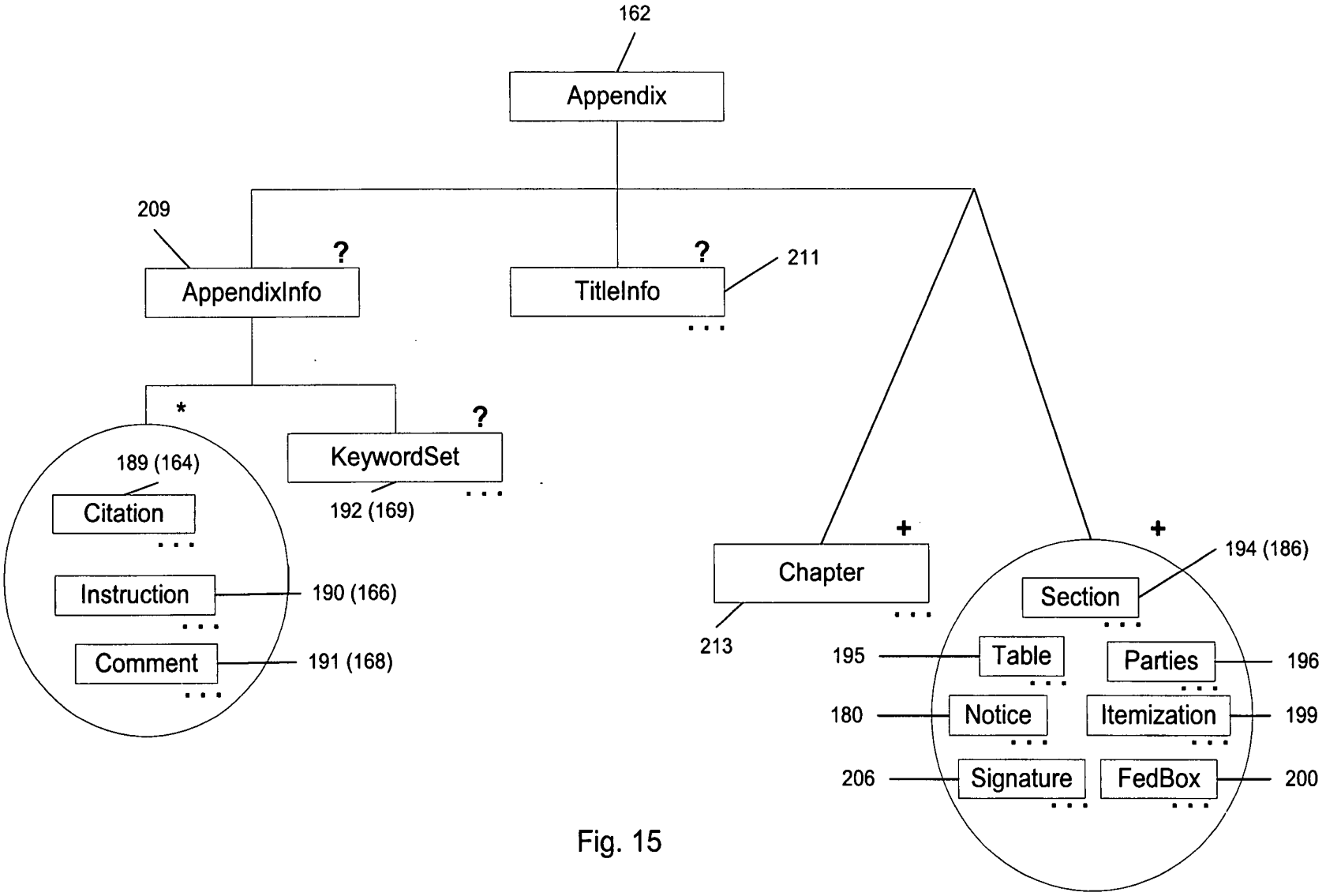

162
Appendix
209
?
AppendixInfo
?
TitleInfo
211
*
?
KeywordSet
189 (164)
Citation
192 (169)
Instruction
190 (166)
Comment
191 (168)
+
Chapter
213
+
194 (186)
Section
195
Table
Parties
196
180
Notice
Itemization
199
206
Signature
FedBox
200

Fig. 15

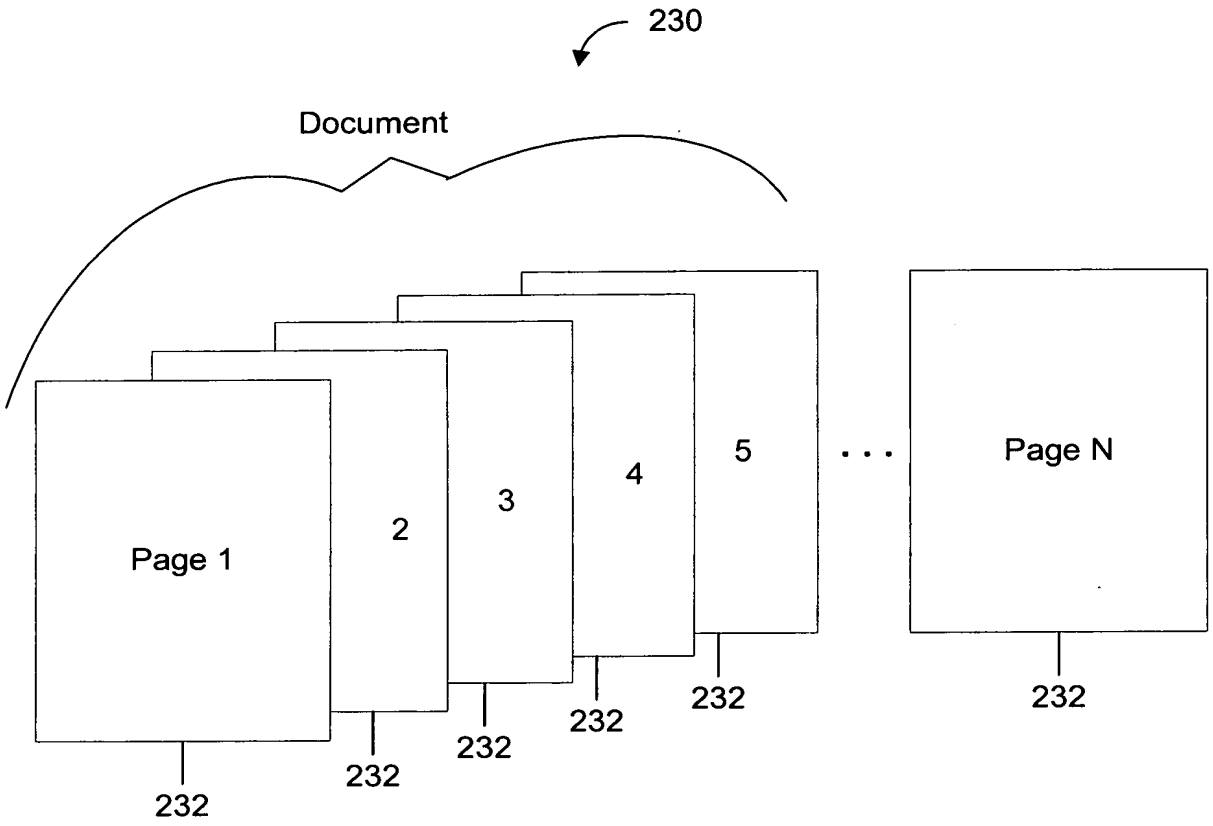


Fig. 16

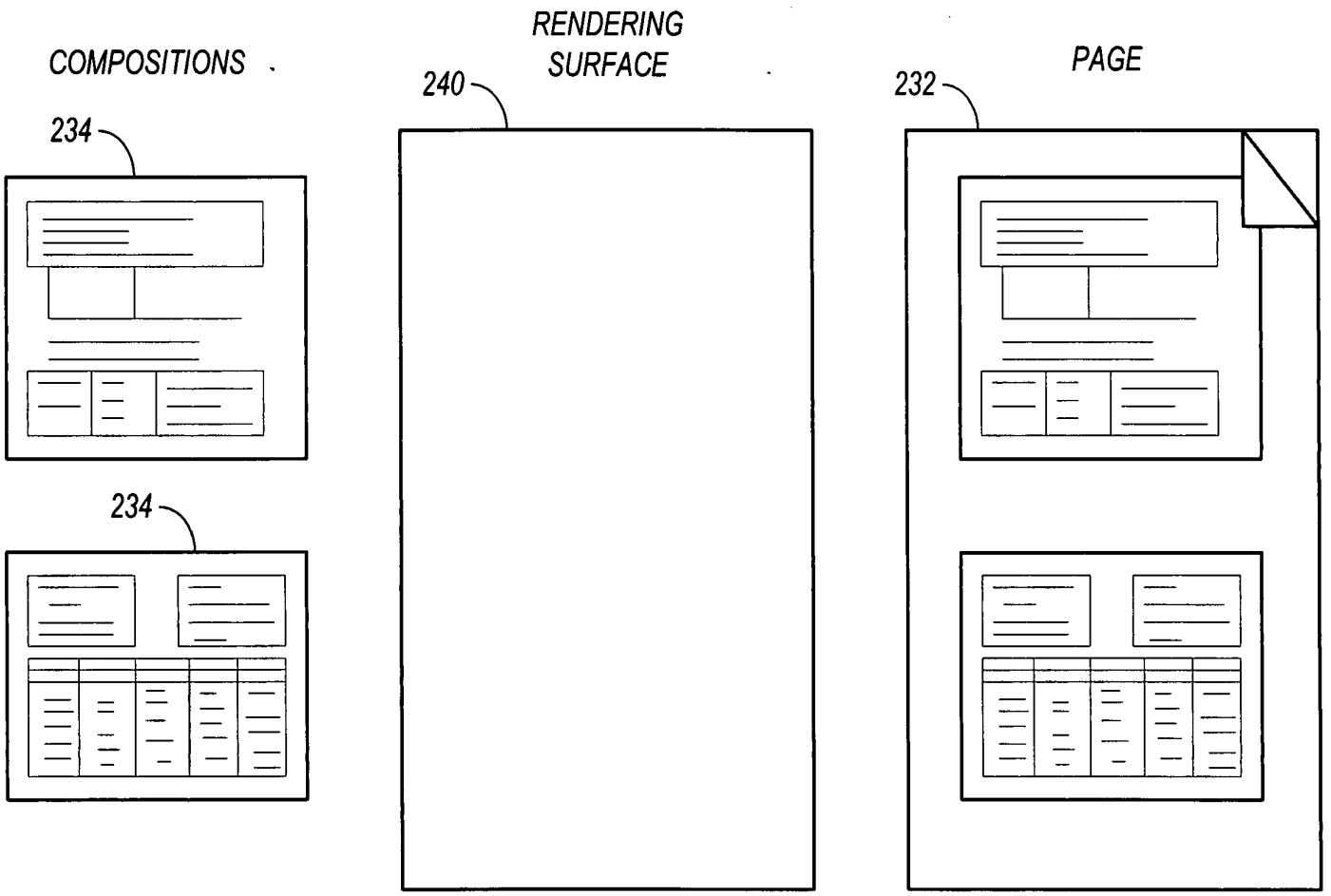


FIG. 17

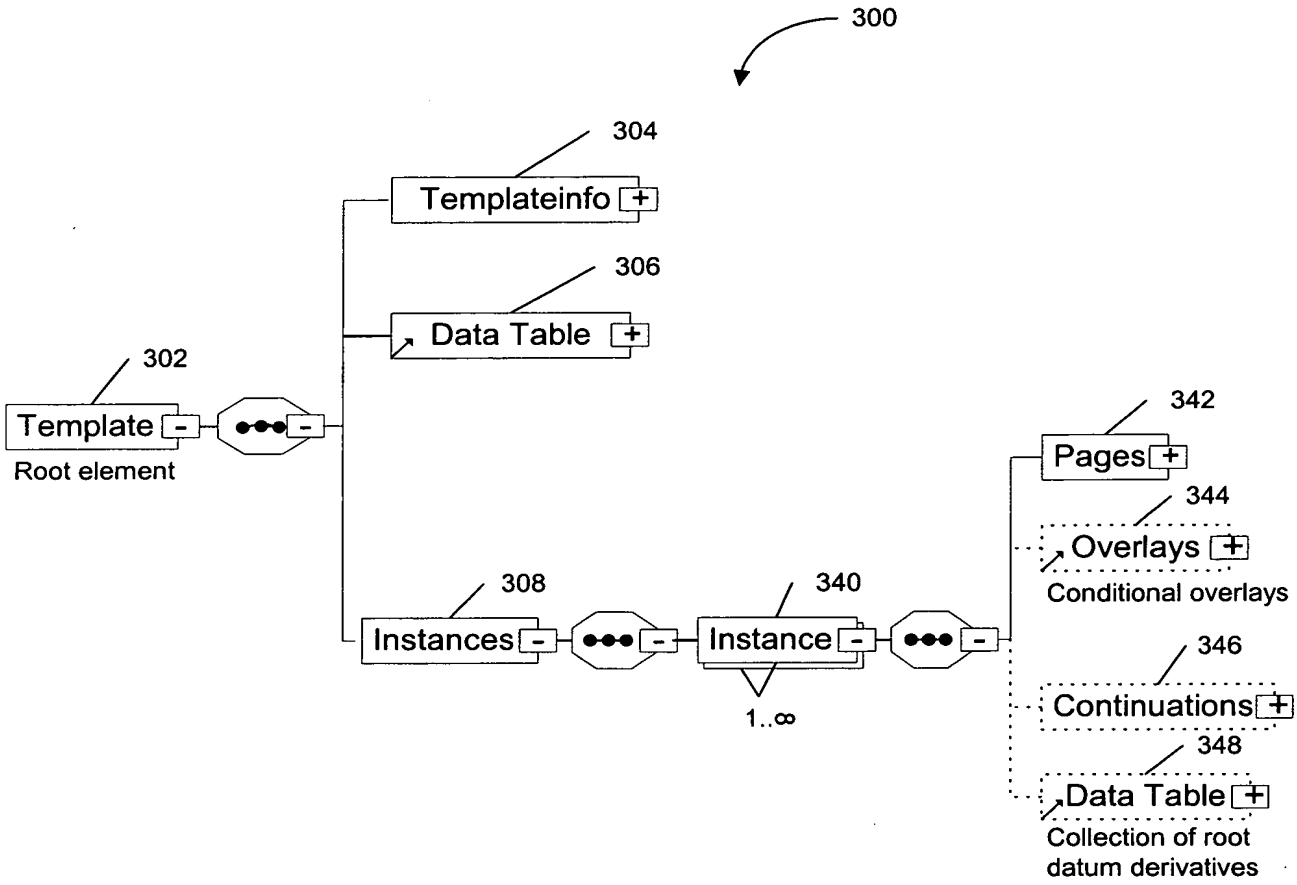
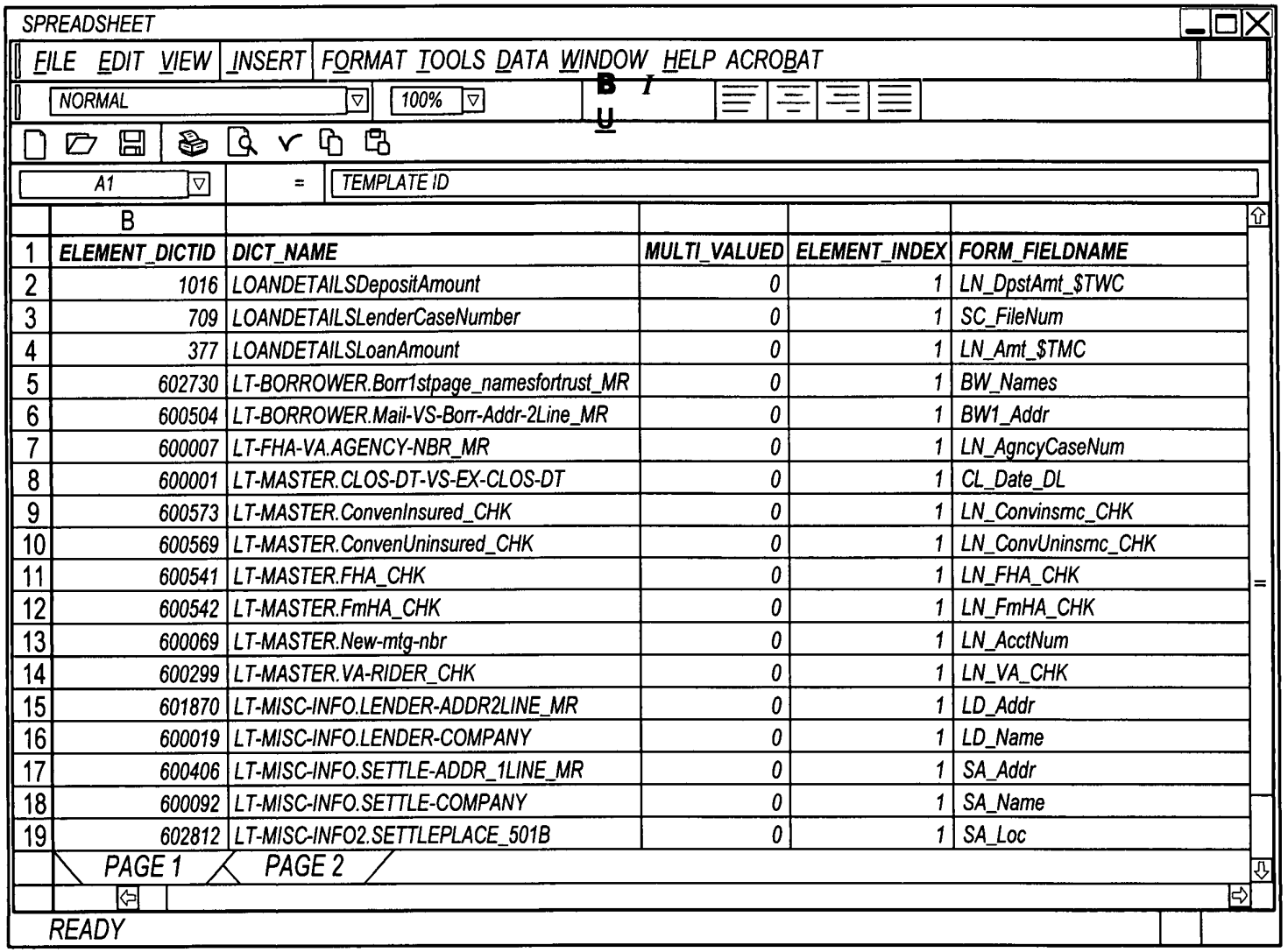

300
304
Templateinfo
306
Data Table
302
Template
Root element
342
Pages
344
Overlays
Conditional overlays
308
Instances
340
Instance
1..∞
346
Continuations
348
Data Table
Collection of root datum derivatives

Fig. 18



	B				
1	ELEMENT_DICTID	DICT_NAME	MULTI_VALUED	ELEMENT_INDEX	FORM_FIELDNAME
2	1016	LOANDETAILSDepositAmount	0	1	LN_DpstAmt_$TWC
3	709	LOANDETAILSLenderCaseNumber	0	1	SC_FileNum
4	377	LOANDETAILSLoanAmount	0	1	LN_Amt_$TMC
5	602730	LT-BORROWER.Borr1stpage_namesfortrust_MR	0	1	BW_Names
6	600504	LT-BORROWER.Mail-VS-Borr-Addr-2Line_MR	0	1	BW1_Addr
7	600007	LT-FHA-VA.AGENCY-NBR_MR	0	1	LN_AgncyCaseNum
8	600001	LT-MASTER.CLOS-DT-VS-EX-CLOS-DT	0	1	CL_Date_DL
9	600573	LT-MASTER.ConvenInsured_CHK	0	1	LN_Convinsmc_CHK
10	600569	LT-MASTER.ConvenUninsured_CHK	0	1	LN_ConvUninsmc_CHK
11	600541	LT-MASTER.FHA_CHK	0	1	LN_FHA_CHK
12	600542	LT-MASTER.FmHA_CHK	0	1	LN_FmHA_CHK
13	600069	LT-MASTER.New-mtg-nbr	0	1	LN_AcctNum
14	600299	LT-MASTER.VA-RIDER_CHK	0	1	LN_VA_CHK
15	601870	LT-MISC-INFO.LENDER-ADDR2LINE_MR	0	1	LD_Addr
16	600019	LT-MISC-INFO.LENDER-COMPANY	0	1	LD_Name
17	600406	LT-MISC-INFO.SETTLE-ADDR_1LINE_MR	0	1	SA_Addr
18	600092	LT-MISC-INFO.SETTLE-COMPANY	0	1	SA_Name
19	602812	LT-MISC-INFO2.SETTLEPLACE_501B	0	1	SA_Loc

FIG. 19

```
.
.
.
<DATATABLE>
 <rdCurrency Name="LOANDETAILSDepositAmount" DataID="1016">
  <Data>
    <Datum><Value/></Datum>
  </Data>
</rdCurrency>
 <rdText Name="LOANDETAILSLenderCaseNumber" DataID="709">
  <Data/>
 </rdText>
 <rdCurrency Name="LOANDETAILSLoanAmount" DataID="377">
  <Value/>
 </rdCurrency>
 <rdText Name="LT-BORROWER.Borr1stpage_namesfortrust_MR" DataID="602730">
  <Data/>
 </rdText>
 .
 .
 .
</DataTable>
 .
 .
 .
```

FIG. 20

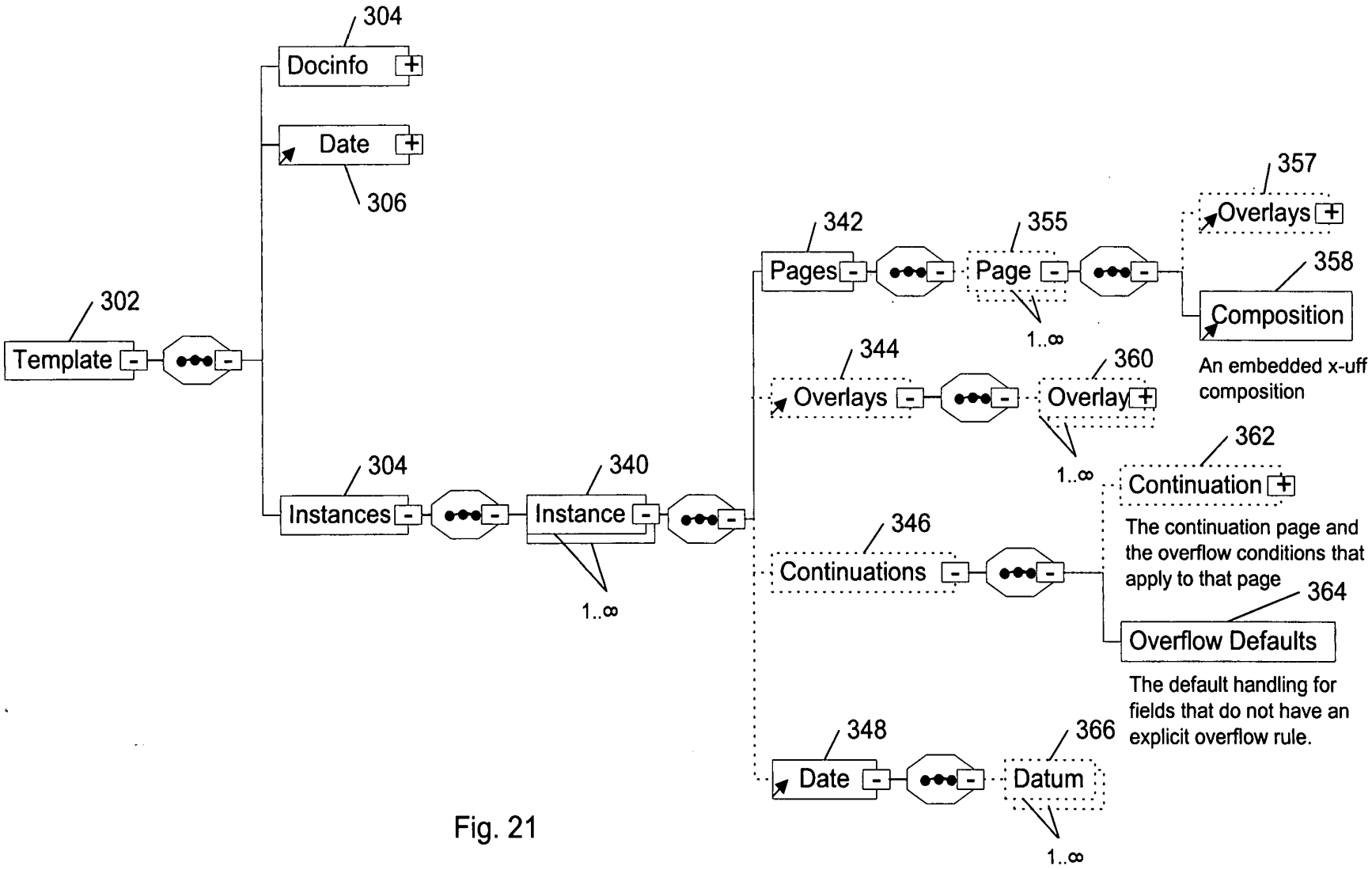

304
Docinfo
Date
306
302
Template
304
Instances
340
Instance
1..∞
342
Pages
355
Page
1..∞
357
Overlays
358
Composition
An embedded x-uff composition
344
Overlays
360
Overlay
1..∞
362
Continuation
The continuation page and the overflow conditions that apply to that page
346
Continuations
364
Overflow Defaults
The default handling for fields that do not have an explicit overflow rule.
348
Date
366
Datum
1..∞

Fig. 21

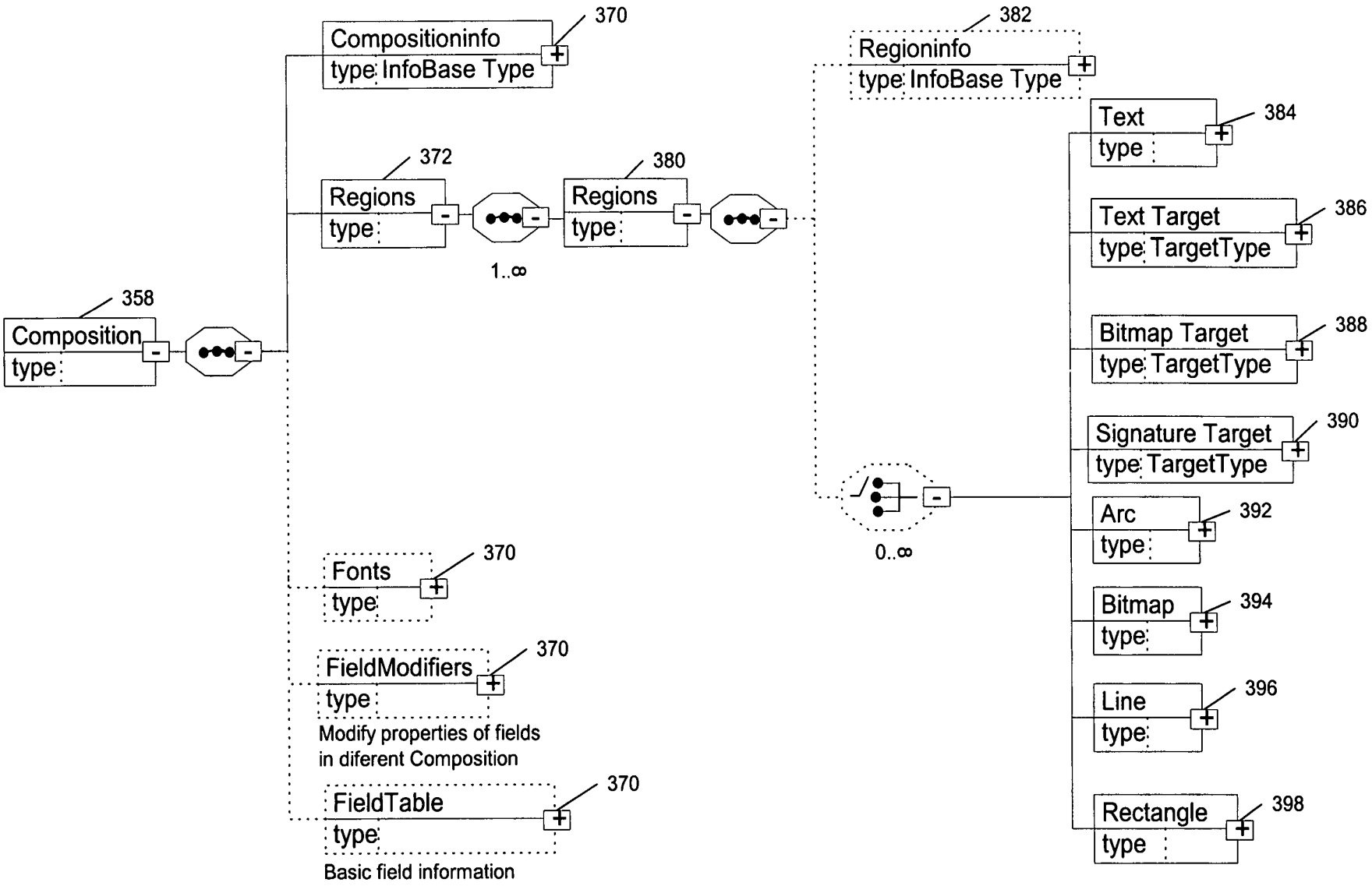

Compositioninfo
type InfoBase Type
370
Regioninfo
type InfoBase Type
382
Regions
type
372
Regions
type
380
1..∞
Composition
type
358
Text
type
384
Text Target
type TargetType
386
Bitmap Target
type TargetType
388
Signature Target
type TargetType
390
0..∞
Arc
type
392
Bitmap
type
394
Line
type
396
Rectangle
type
398
Fonts
type
370
FieldModifiers
type
370
Modify properties of fields
in diferent Composition
FieldTable
type
370
Basic field information

Fig. 22